

AP4009458

by a number of much weaker and somewhat broader bands. The introduction of the alkali metal (Na) leads to broadening of this narrow line and some reduction of its frequency as well as to smearing out of the fine structure and redistribution in the intensity of the weak bands. In addition, there appears in the spectra a band at about 900  $\text{cm}^{-1}$ . The behavior of this polarized band, which is associated with totally symmetrical vibrations of the molecule, was studied in detail as a function of the composition of the glass. The data are analyzed from the standpoint of the donor-acceptor mechanism of coordination transitions. It is concluded on the basis of the analysis that with increase in the alkali metal (sodium) content of the glass the coordination number of at least part of the boron atoms changes from 3 to 4. "The author is grateful to O.S. Molchanov for discussion of the results." Orig.art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 04Mar63

SUB CODE: PH,CH

DATE ACQ: 03Jan64

NR REF SOV: 010

ENCL: 00

OTHER: 023

Card 2/2

BOBOVICH, Ya.S.; LIPINI, E.S.; PEREKALIN, V.V.

Spectroscopic study of the interaction of functional groups in  
nitrodienes and some related compounds. Zhur. strukt. khim.  
5 no.4.546-549 Ag '64. (MIRA 18:3)

1. Gosudarstvennyy opticheskiy institut imeni Vavilova, Leningrad.

BOBOVICH, Ya. S.

"On the role of donor-acceptor interaction in the structure of vitreous bodies."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad,  
16-21 Mar 64.

ACCESSION NR: AP4020925

S/0051/64/016/002/0246/0255

AUTHOR: Tsenter, M.Ya.; Bobovich, Ya.S.

TITLE: Experimental investigation of the relation between Raman spectra and the electronic absorption spectra of some compounds. Frequency dependence of the Raman scattering with excitation outside the absorption band.

SOURCE: Optika i spektroskopiya, v.16, no.2, 1964, 246-255

TOPIC TAGS: Raman spectrum, electronic absorption spectrum, Raman scattering, Raman line intensity, semiclassical scattering theory, carbon tetrachloride, chloroform, benzene, nitromethane, nitrostyrene, nitro compound

ABSTRACT: While the functional dependence of the intensity and degree of polarization of Raman lines on the characteristics of the electronic-vibrational transitions can be described in the framework of quantum-mechanical theory, the usual quantum-mechanical equations are unsuitable for comparisons with experiment. The present work was undertaken to test the validity of the semiclassical theory. The dependence of the Raman line intensity on the frequency of the exciting light was investigated for some liquids transparent in the visible region (carbon tetrachloride,

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ACCESSION NR: AP4020925

chloroform, benzene and nitromethane) and for a series of aromatic nitro compounds (nitrobenzene, para-nitrotoluene, para-nitrophenol, para-nitrophenetole, nitrostyrene, 1,4-bis-( $\beta$ -nitrovinyl)-benzene, para-methoxynitrostyrene, and para-nitroaniline) dissolved in nitromethane. The spectra were excited by a low pressure mercury tube and a specially developed helium discharge tube, yielding lines in the 4047 to 5875 Å range. The Raman spectra were recorded photoelectrically by means of a DES-12 spectrograph; the absorption spectra were recorded by means of an SF-4 spectrophotometer. Some of the line intensity curves are reproduced in figures. It is shown that the observed frequency dependence of the Raman line intensity for different vibrations is satisfactorily described by the semiclassical theory (close to the bands, taking damping into account). Comparison shows that the frequency of the actual transition involved in the scattering, found for the investigated nitro compounds on the basis of the experimental data, is in qualitative agreement with the frequency of the purely electronic transition in the corresponding molecule. Thus, the results indicate that the characteristics of Raman scattering by molecules with continuous electronic absorption spectra is satisfactorily described by the semiclassical theory with excitation both far from and near to the long wavelength absorption band. The authors are grateful to B.S. Neporent and N.G. Bakhshiyev for discussion of the results of the work. Orig. art. has: 2 formulas, 4 figures and 3 tables.

Card 2/2

ACCESSION NR: AP4020954

S/0051/64/016/003/0417/0423

AUTHOR: Tsenter, M.Ya.; Bobovich, Ya.S.

TITLE: Experimental investigation of the relation between the Raman and electronic absorption spectra of some compounds. 2. Frequency dependence of the Raman scattering intensity within the absorption band

SOURCE: Optička i spektroskopiya, v.16, no.3, 1964, 417-423

TOPIC TAGS: Raman spectrum, Raman line intensity, Raman excitation, absorption spectrum, nitro compound, para-nitrosodimethylaniline

ABSTRACT: In an earlier study by the authors (Opt.i spektr.,14,246,1963) involving different nitro compounds it was found that the minimum distance between the peaks of the long wavelength absorption band and the exciting line (4358 Å) was 4500 cm<sup>-1</sup>. Shorter wavelength exciting radiation could not be used owing to the fact that it induced photochemical decomposition or polymerization of the investigated nitro compounds. Accordingly, for the present work for investigating Raman scattering under conditions of intrinsic (fundamental) absorption the authors chose para-nitrosodimethylaniline, which is radiation-stable and has an intense absorption band in the

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ACCESSION NR: AP4020954

region of the 4358 Å Hg line. In view of the fact that no good sources for Raman excitation with close but somewhat different frequencies are available, the location of the effective absorption band relative to the 4358 Å line was varied by using different binary solvent mixtures (carbon tetrachloride with chloroform, orthodichlorobenzene with toluene, toluene with chloroform, and ethyl alcohol with water). This made it possible to shift the absorption band peak of the para-nitrosodimethylaniline from 25 000 to 23 000  $\text{cm}^{-1}$ , generally without change in its intensity and shape (the absorption peaks in the different pure solvents are shown in a figure). Employing a procedure similar to that used in the earlier study, there were investigated the vibrations of the nitroso group and the benzene ring with frequencies of 1410 and 1590  $\text{cm}^{-1}$  as a function of the excitation frequency. The experimental intensity data are summarized in a table, and in a figure. It was found that the intensities of the nitroso group and benzene ring lines attain a maximum value at the same excitation frequency, which is close to the frequency of the purely electronic (zero-zero) transition in the investigated molecules. With shift into the absorption band the intensity of the vibrations of the benzene ring increases more rapidly than the intensity of the vibrations of the nitroso group. Contrary to the assertions of some molecular spectroscopists, the present and earlier data for the nitro compounds indicate that the intensity of the Raman scattering is not necessa-

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ACCESSION NR: AP4020954

rily proportional to the magnitude of the absorption coefficient at the exciting line. "The authors are grateful to B.S.Neporent and N.G.Bakhshiyev for discussion of the results." Orig.art.has: 1 formula, 4 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 15Apr63

DATE ACQ: 02Apr64

ENCL: 00

SUB CODE: PH

NR REF SOV: 007

OTHER: 003

3/3  
Card



ACCESSION NR: AP4020955

S/0051/64/016/003/0424/0428

AUTHOR: Bobovich, Ya.S.; Eydus, Ya.A.

TITLE: Quantitative measurements of intensity in the Raman spectra of powdered substances

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 424-428

TOPIC TAGS: Raman spectroscopy of solids, powder Raman spectra, naphthalene, furan, nitrofurane, pararnitrophenetole, diphenylamine, pararnitrotoluene, stilbene, tolan, diphenylacetylene

ABSTRACT: It is difficult or impossible to obtain Raman spectra by the conventional procedure in the case of poorly soluble substances and substances that undergo photochemical reactions in solution. In principle the problem of obtaining the Raman spectra of such substances in powdered form has been solved; the operation involves the use of powerful mercury tubes and a double monochromator (B.A.Kiselev, Opt. i spektr. 1, 597, 1956; S.L.Berkovich et al, Ibid. 6, 824, 1959; Ya.S.Bobovich and V. M. Pivovarov, ZhETF 29, 696, 1955). In the present article there is described a specific technique for measuring the intensity coefficients of the Raman lines in the

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ACCESSION NR: AP4020955

spectra of fine-crystalline organic powders as well as some applications of the technique. The analyzed substance is mixed with naphthalene and thoroughly ground; the mixture is coated on an oblique cut surface of a wooden cylinder. The exciting radiation is supplied by a helical low-pressure mercury discharge tube and the scattered radiation is viewed, as usual, from the side. The naphthalene serves as the internal standard, i.e., the Raman line intensities are gaged with reference to the intensity of the  $1380\text{ cm}^{-1}$  naphthalene line. It is noted that an essential requirement in the case of colored substances is that the exciting radiation must be of appropriate frequency, i.e., must penetrate into the substance + naphthalene layer. The results of test measurements on a number of substances insoluble and soluble are described; among the insoluble substances were some nitrofurans and para-nitrophenetole (the intensity increases in direct proportion to the molar concentration in the mixture with naphthalene). For the soluble substances the intensity values obtained for the powders and for solutions agree in some cases, but differ significantly in others (but the relative values for different substances are consistent). Thus, the proposed technique makes it possible to obtain the Raman spectra of many substances that cannot be worked with in the form of solutions. Orig.art.has: 2 figures and 2 tables.

Card 2/2

L 16434-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPA(w)-2/EWP(t)/EPA(bb)-2/EWP(b)  
Pab-10/Pq-4/Pt-10/Pu-4 IJP(e)/ESD(ga)/ESD(t)/AFWL/AS(sp)-2/RAEM(a) JD/WH/WH  
ACCESSION NR: AP4048749 S/0051/64/017/005/0755/0758

AUTHORS: Bobovich, Ya. S.; Arkhipenko, D. K. ✓

TITLE: Concerning the structure of pyrocerams catalyzed with titanium dioxide

SOURCE: Optika i spektroskopiya, v. 17, no. 5, 1964, 755-758

TOPIC TAGS: pyroceram, rutile, titanium dioxide, Raman spectrum, glass 27

ABSTRACT: The purpose of the investigation was to clarify the origin of the intense  $120\text{ cm}^{-1}$  line previously observed by one of the authors (Bobovich, DAN SSSR v. 145, 1028, 1962) in the Raman spectrum of pyrocerams obtained by heat treatment of a glass containing titanium dioxide. The Raman and infrared absorption spectra of various samples of titanium dioxide were obtained using the DFS-12 apparatus for the Raman spectra, the UR-10 instrument for the infra-

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ACCESSION NR: AP4048749

red spectra, and the URS-50-I-M instrument for x-ray structure analysis (K $\alpha$  radiation of Co). The spectrum of Soviet "specially pure" titanium dioxide differed greatly from that of a Japanese "Extra pure" brand, and only the latter had a spectrum similar to that of the pyroceram. X-ray structural analysis has shown that the Soviet sample had a rutile structure, while the Japanese had an anatase structure. Tests consisting of converting the rutile structure into the anatase structure have demonstrated that the titanium-containing component in the pyroceram is similar to anatase in structure. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 11Nov63

ENCL: 00

SUB CODE: OP, MT

NR REF SOV: 010

OTHER: 000

Card 2/2

LIPINA, E.S.; PEREKALIN, V.V.; BOBOVICH, Ya.S.

Synthesis and structure of 1,3-nitrobutadienes. Zhur. ob. khim.  
34 no.11:3640-3644 N '64 (MIRA 18:1)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni  
A.I.Gertsena.

L 12836-65 FWT(d)/EWT(l)/EEC(x)-2/EEC-4/EEC(t) Pq-4/Pq-4/Pq-4/Pk-4/PI-4  
IJP(c)/SSB/AST(a)-5/ASD(m)-3/AFWL/AFETR/ASD(d)/AEDC(b)/RAEM(a)/SSP(rs)/TSD(t)

ACCESSION NR: AP4046179

S/0058/64/084/001/0037/0074

AUTHOR: Bobovich, Ya. S. 8

TITLE: Modern technical means and methods for the investigation of  
Raman spectra 7

SOURCE: Uspekhi fizicheskikh nauk, v. 84, no. 1, 1964, 37-74

TOPIC TAGS: Raman spectroscopy, depolarization, refractive index,  
photographic equipment, photoelectric equipment, spectrograph,  
spectrometer

ABSTRACT: This is an extensive review article devoted, on the one  
hand, to a description of the new experimental techniques and re-  
search methods used in Raman spectroscopy, and on the other hand, to  
various factors that are likely to influence adversely the accuracy  
of the measurements and the correct interpretation of the measure-  
ment results. Principal attention is paid to factors which have not

Cord 1/3

L 12836-65

ACCESSION NR: AP4046179

been thoroughly treated in the existing literature, or whose interpretation calls for a review in light of more recent data. This includes descriptions of modern photographic and photoelectric equipment, possible sources of excitation of spectra and their power supply, methods used to investigate powders, gases, and vapors at moderate and high pressures, analysis of the conditions under which comparable values are obtained, the effect of the refractive index of a liquid medium on the measured quantities, and other related problems. The section headings are: 1. Introduction. 2. Intensity and degree of depolarization of the scattering bands in a gaseous medium. 3. Intensity and degree of depolarization of scattering bands in liquids. A. Optical effects. B. Intermolecular interaction. C. Effect of some other factors on the band intensity. D. Effect of refractive index of the liquid on the degree of band depolarization. 4. Photographic and photoelectric equipment. A. Spectrographs. B. Spectrometers. C. Spectrum excitation sources. 5. Particular procedures. A. Powdered substances. B. Gases and

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L 12836-65

ACCESSION NR: AP4046179

vapors at moderate pressures. C. Gases and vapors at high pressures.  
Orig. art. has: 31 figures and 22 formulas.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: OP

NR REF SOV: 077

OTHER: 093

Card 3/3



BOBOVICH, Ya.S.; BELYAYEVSKAYA, N.M.

Relation between some spectral characteristics and the reactivity  
of aromatic compounds. Part 1. Opt. 1 spektr. 19 no.2:  
198-205 Ag '65. (MIRA 18:8)

BOBOVICH, Ya.S.

Correlation between the reactivity of aromatic nitro-compounds  
and their interaction with the solvent. Opt. 1 spektr. 19  
no.2:279-280 Ag '65. (MIRA 18:8)

L 13002-66 EWT(1)/EWT(m)/EWP(j)/EWA(o) IJP(c)/RPL WJ/JN/GG/RM  
ACC NR: AP6001639 SOURCE CODE: UR/0051/65/019/006/0886/0892

AUTHOR: Bobovich, Ya. S.

ORG: none

TITLE: Spectroscopic manifestation of intra- and intermolecular interaction of nitro groups

SOURCE: Optika i spektroskopiya, v. 19, no. 6, 1965, 886-892

TOPIC TAGS: chloroform, aromatic nitro compound, Raman scattering, spectrum analysis, *molecular interaction*

ABSTRACT: A number of aromatic nitryl compounds are spectragraphically studied and the experimental data are interpreted with regard to various singularities in Fermi resonance phenomena. A band for holosymmetric stretching vibrations in the nitro group is studied in the Raman scattering spectrum for the various aromatic nitro compounds as a function of the component concentration, type of solvents and addition of diphenylamine, which has a considerable effect on nitro groups. It is found that there is a redistribution of intensities between components of splitting under

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UDC: 535.375 : 539.194 + 539.196.3

L 13002-66

ACC NR: AP6001639

effect of the solvent. However, none of the splitting components disappeared at room temperature. This tendency was observed only during heating or cooling of the solutions. The spectrum for *n*-nitroaniline in a mixture of nitromethane +  $\text{CCl}_4$  (volumetric ratio 1:1) excited by mercury lines 4358 and 5461 Å shows a stronger increase in the low frequency component than in the high frequency component as the excitation line approaches the natural absorption of the molecules. The averaged data give an intensity ratio of 1.5. The effect of chloroform, bromoform, ethyl alcohol and diethnylamine on the intensity of the nitro group band is studied. All of the experimental material is considered from the standpoint of competing processes of intra- and intermolecular electron transfer. The spectral changes which are observed in a number of cases are interpreted as donor-acceptor interactions, in the hydrogen bond in particular. Measurements showed that the addition of diethnylamine to a solution of *n*-nitrodimethylamine in acetone causes splitting in the band of holoymmetric stretching vibrations in the nitro group and a nearly triple amplification. A transition from acetone to alcohol is accompanied by a nearly double increase in intensity. At the same time, the band splits and its maximum is shifted somewhat toward lower oscillatory frequencies. Bromoform as a solvent shows a nearly triple increase in band intensity over chloroform. It is shown that these effects of intra- and intermolecular interactions on the properties of nitro group

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L 13002-66

ACC NR: AP6001639

vibrations are direct donor-acceptor phenomena and are not due to Fermi resonance which may take place between fundamental oscillations in these molecules. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 08Sep64/ ORIG REF: 015/ OTH REF: 002

jrn

Card 3/3

L 64558-65 EST(m)/EPF(c)/EWP(j)/T/EWA(c) JW/RM

ACCESSION NR: AP5020830

UR/0020/65/163/004/0894/0896

AUTHOR: <sup>55</sup>Lipina, E. S.; <sup>55</sup>Perekalin, V. V.; <sup>65</sup>Bobovich, Ya. S.

TITLE: Synthesis and structure of 1,4-dinitrobutadienes-1,3 d <sup>65</sup>

SOURCE: AN SSSR. Doklady, v. 163, no. 4, 1965, 894-896

TOPIC TAGS: diene synthesis, nitrobutadiene, organic synthetic process

ABSTRACT: A method was worked out for synthesizing nitrobutadienes potentially useful in organic syntheses. Suspensions of disodium salts of 1,4-dinitrobutenes-2 in ether or water were reacted with one mol of oxidizing agent to form the corresponding 1,4-dinitrobutadienes-1,3. 1,4-Dinitrobutadiene-1,3 (I), 1,4-dinitro-2,3-dimethylbutadiene-1,3 (II), 1,4-dinitro-1,4-diphenylbutadiene-1,3 (III) and 1,4-dinitro-2,3-diphenylbutadiene-1,3 (IV) were studied. IR spectra showed I was a conjugated system, with conjugation somewhat weakened by action of the terminal nitro groups. Conjugation in II was decreased further by the methyl radicals. Spatial hindrance in III and IV led to the formation of 2

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L 64558-65

ACCESSION NR: AP5020830

series of geometrical isomers, is-cis and trans-trans. The 1,4-dinitrobutadienes-1,3 added nucleophilic reagents to the 2-1 position with subsequent vinyl-allyl isomerization. Addition was onto the terminal C atom of the system when the second and third C atoms were blocked. Thus, when isomers of IV underwent the Michael reaction, the methylene component added to the terminal carbon, and after subsequent denitration, diene systems were formed. II underwent vinyl-allyl isomerization to the inactive 2,3-dibromomethylbutadiene-1,3. The latter readily formed the tetrabromide while II added Br only under drastic conditions or on nucleophilic bromination. Orig. art. has 6 equations.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute)

SUBMITTED: 13Jul64  
NR REF SOV: 006

ENCL: 00  
OTHER: 005

SUB CODE: 00, 60

Card 2/2

L 25717-66 EWT(1)/EWT(m)/EWP(a) WH  
 ACC NR: AP6002800 SOURCE CODE: UR/0237/60/000/002/0009/0017  
 AUTHOR: Bobovich, Ya. S.; Tulub, T. P. 64  
 ORG: none 6  
 TITLE: Combination scattering as a method for the study of the structure of inorganic glasses  
 SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 2, 1960, 9-17  
 TOPIC TAGS: IR spectroscopy, combination scattering, chemical bonding, silicate glass, molecular structure  
 ABSTRACT: Using a number of examples, the authors attempt to prove the possibilities and characteristics of the method of combination scattering, particularly in the case of silicate systems. A detailed report on the factual material used in this attempt was published by the authors in an earlier paper (UFN, 66, 1958, p. 3). In order to study the oscillating movements of the atoms of a molecule, the authors constructed a N system, using small balls connected by springs with each other. The balls represent atoms and the springs, elastic forces which act between the atoms. The system N could accomplish 3N-6 independent oscillations. Not all these oscillations show up in the spectra of combination scattering. In order for an oscillation to become active in scattering, it must be accompanied by changes in the polarizability of a  
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ACC NR: AP6002800

single bond or the entire molecule. In the case of the infra-red spectroscopy method, another value is valid: a change in the dipole moment of the molecule during the oscillation of its atoms. Based on these facts, the authors claim that the scattering intensity characterizes definitely the type of bond. This is true in the case of oscillations of diatomic molecules and individual bonds in polyatomic molecules. The authors conclude that data on the relative intensity of combination scattering bonds is supported by the Pauling electronegative scale. It is possible to assume that further precision measurements of intensity will provide an answer to this important and difficult problem. Orig. art. has: 10 figures.

SUB CODE: 07 / SUBM DATE: 22Sep59/ ORIG REF: 017/ OTH REF: 014

Card 2/2

ACC NR: AF7004144

SOURCE CODE: UR/0051/67/022/001/0159/0160

AUTHOR: Bortkevich, A. V.; Sokolova, O. G.; Tsenter, M. Ya.; Bobovich, Ya. S.

ORG: none

TITLE: Influence of solvents on the generation threshold of the  $992\text{ cm}^{-1}$  line in the stimulated Raman scattering of benzene

SOURCE: Optika i spektroskopiya, v. 22, no. 1, 1967, 159-160

TOPIC TAGS: ~~stimulated~~ Raman scattering, stimulated emission, benzene, laser application, organic solvent, *Raman spectrum, ruby laser, optic filter/KS-19 optic filter*

ABSTRACT: To eliminate the effects of the reaction of the investigated radiation on the operation of the master generator, the authors have investigated the generation thresholds of the  $992\text{ cm}^{-1}$  of the stimulated emission of benzene in different binary mixtures inside the resonator under the assumption that this reaction can be neglected at low conversion coefficients of the scattered radiation. The spectra were excited with a Q-switched ruby laser having a power of approximately 5 MW and a pulse duration of 75 nsec. The optical shutter was a filter of KS-19 glass. The spectra were recorded photographically with a diffraction grating. The chosen measure of the generation threshold of the  $992\text{ cm}^{-1}$  line was the effective thickness of the benzene layer in the tested solution at fixed laser operation mode and fixed cell length. This thickness was 15 mm for pure benzene, increasing to 25 mm for benzene dissolved in toluol and carbon tetrachloride, to 30 mm for solutions in hexane, cyclohexane,

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UDC: 535.375 + 532.73.0

ACC NR: AF7004144

chloroform, acetone, and nitromethane, and to 35 mm for doddecane, bromoform, and methylcyclohexanon. The results are interpreted as meaning that in all solvents the generation threshold is nearly double compared with pure benzene, and that the threshold is approximately the same (within  $\pm 15\%$ ) for almost all solvents. No explicit connection could be discerned between the observed quantities and the intermolecular interaction. The difference between the pure benzene and its solutions may be due to the interaction between modes or to resonant parametric interaction. Additional experiments are necessary for a full clarification. Orig. art. has: 1 table.

SUB CODE: 20/

SUBM DATE: 22Jul65/

ORIG REF: 003/

OTH REF: 005

[WA-14]

[02]

Card 2/2

MEL'NICHENKO, A.K. ; BOBOVICH, Yu.I., mladshiy nauchnyy sotrudnik; KOGAN, A.P., mladshiy nauchnyy sotrudnik

Optimal standards for the turnover of merchandise, the filling of prescriptions for outpatient polyclinics and some organizational forms for drug service to the population. Sborn. nauch. tr. TSANII 3:5-19 '62. (RDA 16:11)

1. Direktor TSentral'nogo aptechnogo nauchno-issledovatel'skogo instituta (for Mel'nichenko). 2. Otdel organizatsii i ekonomiki aptechnogo dela TSentral'nogo aptechnogo nauchno-issledovatel'skogo instituta (for Bobovich, Kogan).

I. 2535-66 EWT(m)/EWA(d)/EWP(t)/EWP(s)/EWP(b) JD  
 ACCESSION NR: AP5021359

UR/0120/65/000/004/0182/0187  
 621.318.3:621.384.634

50  
 30  
 B...

AUTHOR: Akhmanov, V. V.; Barkov, L. M.; Nikol'skiy, B. A.; Sokolov, B. V.;  
Khakimov, S. Kh.; Shestakov, V. D.; Bobovikov, R. S.; Dobretsov, Yu. P.;  
Zamolodchikov, B. I.

TITLE: An arrangement for producing pulsed magnetic fields of strengths up to 150 kilogauss

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 182-187

TOPIC TAGS: pulsed magnetic field, thyatron, synchrocyclotron

ABSTRACT: The units of an apparatus for producing a pulsed magnetic field of 146 kilogauss in a space of about 600 cm<sup>3</sup> are described. Pulsed magnets of beryllium bronze are powered by a capacitor bank of 0.1 farad capacitance. The capacitors are charged through limit resistances to 2 kv from a thyatron rectifier, and a I-100/5 ignitron is used as the switching element. Synchronization and control for operation with a synchrocyclotron are obtained by a special circuit. This arrangement for obtaining the pulsed field operates reliably. In the tests two separate magnets were used, each producing a field of 146 kilogauss. The use of the I-100/5

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ACCESSION NR: AP5021359

20

ignitron when proper heating and cooling were maintained prior to switching in the field secured operation without breakdown for 20—40 hr at a switching rate of 10/min. The joint operation of the pulsed magnet with the synchrocyclotron required some rearrangement of the control system to guarantee that no particle was emitted without accompaniment of a pulsed magnetic field. "The authors express their thanks to V. I. Danilov, T. N. Tomilina, and I. B. Yanchevich for carrying on the work. The authors are grateful to I. I. Gurevich and V. P. Dshalepov for their constant interest and help in the work. The authors express their thanks to V. I. Smirnov, F. Ye. Gugin, I. P. Lavrushkin, Yu. V. Maksimov, A. V. Shestov, V. I. Ivanov, I. M. Markachev, A. F. Burtsev, B. V. Degtyarev, N. P. Chistyakov, and M. T. Berezov for their aid in maintaining and operating the equipment." Orig. art. has: 11 figures and 1 table. [04]

ASSOCIATION: Institut atomnoy energii GKAE, Moscow (Institute of Atomic Energy GKAE);  
INAP OIYaI; NII EFA; NII

SUBMITTED: 17Jun64

ENCL: 00

SUB CODE: EAP

NO REF SOV: 001

OTHER: 003

ATD PRESS: 4110

*beh*  
Card 2/2

IZUMRUDOVA, T.V.; SHORYGINA, N.N.; BOBOVNIKOV, B.M.; IVANOVA, E.K.

Production of "sunil" in the Andizhan Hydrolysis Plant. Gidroliz.  
i lesokhim.prom. 18 no.4:16-17 '65. (MIRA 18:6)

1. Institut organicheskoy khimii AN SSSR (for Izumrudova,  
Shorygina). 2. Andizhanskiy gidroliznyy zavod (for Bobovnikov,  
Ivanova).

5/120/62/000/004/030/047  
E140/E420

24.6730

AUTHORS:

Kulakov, F.M., Kardash, A.A., Bobovikov, R.S.,  
Spevakova, F.M., Gol'din, L.L., Kleopov, I.F.,  
Koshkarev, D.G., Radkevich, I.A., Sokolovskiy, V.V.,  
Sharnov, B.I.

TITLE:

The system for magnetic field correction of the  
proton synchrotron.

PERIODICAL: Pribery i tekhnika eksperimenta, no.4, 1962, 158-167

TEXT: The magnetic field configuration in the strong-focused  
7 Gev machine is adjusted by a series of correction systems  
permitting the betatron oscillation frequency to be controlled.  
and resonance disturbances of the orbit to be eliminated. The  
system used for field correction is described together with the  
system for switching and exciting the windings, with experimental  
data on their effect on the beam. The windings permit  
adjustment of the magnetic field decay index, the azimuthal  
asymmetry of the field, compensation of the nonlinear distortion  
of the field with saturation, correction of the position of the  
neutral plane and the differences between the focusing and  
Card 1/2.



BOBOVIKOV, R.S.; PLETENEV, B.V.; SPEVAKOVA, F.M.; STOLOV, A.M.

Principles of the construction of resonance systems of supply  
of synchrotron electromagnets. Elektrofiz. app. no. 2:189-  
198 '64. (MIRA 18:3)

MORAVEC, I. BOBOVNICKY, J.

Lytic mixtures in vertebral syndromes. Bratisl. lek. listy  
44 no.2:120-124 '64.

1. Neurologické oddelenie nemocnice s poliklinikou v Skalici,  
OUNZ Senica n/Myjavou; veduci: MUDr. Ivan Moravec.

\*

BOBOVNICKY, Peter, inz.

Automatic tuning of the oscillator of a television receiver.  
Sdel tech 9 no.10:387-388 0 '61.

Stapled and  
being rerun.

24.6730

S/120/62/000/004/030/047  
E140/E420

AUTHORS: Kulakov, F.M., Kardash, A.A., Sobovikov, R.S.,  
Spevakova, F.M., Gol'din, L.E., Kleopov, I.F.,  
Koshkarev, D.G., Radkevich, I.A., Sokolovskiy, V.V.,  
Sharnov, B.I.

TITLE: The system for magnetic field correction of the  
proton synchrotron.

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 158-167

TEXT: The magnetic field configuration in the strong-focused  
7 Gev machine is adjusted by a series of correction systems  
permitting the betatron oscillation frequency to be controlled  
and resonance disturbances of the orbit to be eliminated. The  
system used for field correction is described together with the  
system for switching and exciting the windings, with experimental  
data on their effect on the beam. The windings permit  
adjustment of the magnetic field decay index, the azimuthal  
asymmetry of the field, compensation of the nonlinear distortion  
of the field with saturation, correction of the position of the  
neutral plane and the differences between the focusing and  
Card 1/2

The system for magnetic field ...

S/120/62/000/004/030/047  
E140/E420

defocusing groups of blocks. There are two sets of these windings, the "gradient" and the "nonlinear" windings on the magnetic pole surfaces facing the chamber. Measured data presented in the article indicate the effectiveness of the corrections in stabilizing the betatron frequency. However, it is considered that further adjustments will be made in the course of the work. There are 15 figures. VB

ASSOCIATIONS: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)  
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)

SUBMITTED: March 29, 1962

Card 2/2

NAZYROV, G.N.; VENGERSKAYA, Kh.Ya.; BOBOVNIKOV, B.M.; FEDOROVA, Ye.S.

Improve labor conditions in hydrolysis plants. Gidroliz. i  
lesokhim. prom. 14 no.5:16 '61. (MIRA 16:7)

1. Uzbekskiy nauchno-issledovatel'skiy sanitarnyy institut (for  
Nazyrov, Vengerskaya). 2. Andizhanskiy gidroliznyy zavod (for  
Bobovnikov, Fedorova).  
(Hydrolysis)

BOBOVNIKOV, B.M.; TSIRLIN, Yu.A.; CHEPIGO, S.V.; SHPUNTOVA, M.Ye.

Obtaining furfureole and ethyl alcohol by complex processing  
of cottonseed hulls. *Gidroliz. i lesokhim. prom.* 10 no.2:14-17  
'57. (MLRA 10:5)

1. Andizhanskiy gidroliznyy zavod (for Bobovnikov). 2. Vsesoyuznyy  
nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirovoy  
promyshlennosti. (for TSirlin, Chepigo, and Shpuntova).  
(Furaldehyde) (Ethyl alcohol) (Cottonseed)



KOZLOV, A.I.; VAKAYEVA, M.S.; GORSHKOV, I.I.; BOBOVNIKOV, B.M.

Means of lowering the costs of furfurole produced by hydro-  
lysis plants in operation. Gidroliz.i lesokhim.prom. 13  
no.4:21-23 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-  
spirtovoy promyshlennosti (for Kozlov, Vakayeva, Gorshkov).
2. Andizhanskiy gidroliznyy zavod (for Bobovnikov).  
(Furaldehyde) (Hydrolysis)

MEL'NIKOV, N.P.; TSIRLIN, Yu.A.; FEDOTOVA, S.A.; BOBOVNIKOV, B.M.; IVANOVA, E.K.

Continuous neutralization of furfurole-containing vapors.

Gidroliz. i lesokhim. prom. 16 no.7:20-23 '63. (MIRA 16:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirovoy promyshlennosti (for Mel'nikov, TSirlin, Fedotova). 2. Andizhanskiy gidroliznyy zavod (for Bobovnikov, Ivanova).

BOBOVNIKOV, D.Z.

Growing sugar beets for academic purposes. Biol. v shkole no.3:34-36  
My-Je '62. (MIRA 15:7)

1. Kurskiy institut usovershenstvovaniya uchiteley.  
(Sugar beets) (Agriculture--Study and teaching)

*BOBOVNIKOV, V.F.*

IGNAT'YEV, Aleksandr Fedorovich; BOBOVNIKOV, V.F., otvetstvennyy red.

[Railroad construction and mechanization of building work] Zhelezno-  
dorozhnoe stroitel'stvo i mekhanizatsiia stroitel'nykh rabot. Kiev,  
Ob-vo po rasprostraneniui polit. i nauchn.zhanii Ukrainskoi SSR,  
1957. 35 p. (MIRA 11:4)

(Railroads--Construction)

L 2656-66 EWT(1)/EWT(m)/FCC DIAAP GH/GS

ACCESSION NR: AT5023951

UR/0000/65/000/000/0361/0372

AUTHOR: Sereda, G. A.; Bobovnikova, Ts. I.

TITLE: Strontium-90 in the fresh-water reservoirs of the Soviet Union in 1961-1962

SOURCE: Nauchnaya konferentsiya po yadernoy meteorologii. Obninsk, 1964. Radioaktivnyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (Radioactive isotopes in the atmosphere and their use in meteorology); doklady konferentsii. Moscow, Atomizdat, 1965, 361-372

TOPIC TAGS: nuclear meteorology, water pollution, radioactive pollution, radioactive isotope, radioactive fallout, radioactive tracer, soil contamination, organism contamination

ABSTRACT: In the period 1961-1962 a two-part study was made of the  $Sr^{90}$  content of the rivers and reservoirs of the Soviet Union. The first phase consisted of determinations of the  $Sr^{90}$  content in five of the rivers in the Moscow region in relation to global fallout, the  $Sr^{90}$  content in the soils in these river basins, in the organisms living in the water, and in land-area plant life. The second phase of the study involved the measurement of the  $Sr^{90}$  content in 70-100

Card 1/2

L 2656-66

ACCESSION NR: AT5023951

0  
rivers and reservoirs in the Soviet Union (at the rate of 10 samples a year). Statistical analyses of the measurements made over the two-year period established that the minimum number of analyses required to check the  $Sr^{90}$  content in fresh-water reservoirs is one to two samples during low-water periods, and a slightly larger number during floods. Since the  $Sr^{90}$  content in materials carried in suspension in the water was found to be negligible, special determinations were not required. The  $Sr^{90}/Ca$  ratio was found to be 2—11 times larger in the waters of the 60—70° North Latitude belt than it was in those located in the middle and low latitudes. This fact was attributed to the higher Ca content in the chernozems, sierozems, and chestnut soils of the forest-steppe and steppe zones in the southern part of the Soviet Union. Orig. art. has: 2 figures and 7 tables. [ER]

ASSOCIATION: none

SUBMITTED: 28Apr65

ENCL: 00

SUB CODE: ES, NP

NO REF SOV: 003

OTHER: 002

ATD PRESS: 4101

Card 2/2

BOBOVSKAYA, N. N.

ISSUE/Medicine - Vagina  
Medicine - Uterus, Cervix

May 1948

"Gramicidin as One of the Factors in the Treatment of Endocervicitis, Colpitis and Cervical Necrosis," N. N. Bobovskaya, A. G. Markovkina, Women's Consultation Board No 13, Basic Consultation Board, Obstetrics Gynecol Clinic, Rostov Med Inst, 1 p

"Gov Meditsina" No 5

Of 120 patients treated with gramicidin, 80 were for gonorrheal endocervicitis, 30 for nongonorrheal endocervicitis, and 10 for colpitis caused by trichomonads. Gives methods of treatment and results for each group.

ISSUE/Medicine - Vagina (Contd.)

May 1948

Gramicidin is effective for endocervicitis. In gonorrheal cases it was used in conjunction with per os administration of sulfamides. Rapid clinical effect was observed in colpitis cases, but was usually short-lived.

76170

BOBOWICZ, H.

Computing group dimensions for selective assembly. p. 277. (Strojirenstvi,  
Vol. 7, No. 4, Apr 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.



54903  
P/035/62/000/006/001/002  
D265/D302

1.8000

AUTHOR:

Bobowicz, Henryk, Doctor, Engineer

TITLE:

Applying the calculus of probability to interchangeable production with the two-dimensional scatter

PERIODICAL:

Przegląd mechaniczny, v. 11, no. 6, 1962, 161 - 166

TEXT:

The author proves that during batch production machining the accuracy obtained by the operator can be predicted using the Gauss' probability curves applied to the normal scatter of tolerances. The author analyzes mathematically and provides graphical solutions for: 1) The occurrence of events referred to one feature of an investigated object (tolerance), 2) the occurrence of events referred simultaneously to two or more objects having the same features (fits) and 3) the occurrence of events having simultaneously several features referred to one object, e.g. the probability of obtaining certain dimensions in the batch production of screws - the thread being the object, and P.C.D. and pitch - the features occurring simultaneously. This last case of two

Card 1/2

X

P/035/62/000/006/001/002

D265/D302

Applying the calculus of probability ...

-dimensional scatter is analyzed in detail and a graphical form of its equation is given. The author provides a simplified method for practical applications and illustrates its use in problems of two-dimensional scatter. There are 12 figures, 2 tables and 9 Soviet-bloc references.

ASSOCIATION: C.B.K. Łożysk tocznych, Warszawa (C.B.K. of Roller Bearings, Warsaw)

Card 2/2

4

BOBCWICZ, Henryk, dr., inż.

Application of the calculus of probability in the interchangeable production at the two-dimensional scatter; a discussion. Przegl mech 21 no.6:161-166 '62.

1. Centralne Biuro Konstrukcyjne Łozysk Tocznych, Warszawa

BOBOWICZ, Henryk, dr., inż.

Establishing workshop tolerances for chain dimensions in quantity and mass production. Mechanik 34 no.1:19-23 '62.

1. Centralne Biuro Konstrukcyjne Łozysk Tocznych, Warszawa.

POLAND

CZLONKOWSKI, Franciszek, KONIECZKA, Halina, and BOGORSKA, Maria; Drug Institute (Instytut Lekow), Division of Methods and Organization (Dzial Metodyczno-Organizacyjny) (Director: Magister F. CZLONKOWSKI)

"Post-war Progress in New Forms of Drugs."

Warsaw, Farmacja Polska, Vol 19, No 9, 10 May 63, pp 173-182.

Abstract: Review article on new forms of medication developed since the war, with an introduction and the following headings: Tablets, Coated tablets, Two-stage tablets, Spansulae--Microdrageettes, Parenterally administered drugs, Ointments with new bases and rectal forms, Therapeutic creams, Suppositories with new bases and new forms of rectal medications, Aerosols, Suspensions, Dry emulsions and suspensions, Hypospray jet injectors, and Placebos, with a brief note on their advantages and contribution of industrial pharmacy to their development. There are 55 references, of which about 10 each are Polish and German, and the others Western.

1/1

WŁODZIMIECH GŁOZKA, Franciszek, mgr; KONIŃSKI, Hanna, inż.; SZKŁANIEC, Maria

Suspensions and pastes as biphasic dispersed systems and their  
importance in prescriptions and the pharmaceutical industry.  
Farmacja Pol 20 no. 5/6/153-159 25 Mr '64.

1. Division of Methods and Organization, Drug Institute,  
Warsaw, Head: Franciszek Głozkowski.

GONCHAREVSKIY, M.S., kandidat tekhnicheskikh nauk; BOBOYAVLENSKAYA, N.Y.,  
kandidat tekhnicheskikh nauk.

Anticorrosive protection of pipes during transportation and  
storage. Stal' 16 no.7:619-623 J1 '56. (MLRA 9:9)

(Corrosion and anticorrosives) (Pipes, Steel--Corrosion)

BOBOIAVLENSKII, L. N.

Boboiavlenskii, L. N. On the Use of Standard Solutions of Radium for Measuring Radium and Radium-Emanations. Ezmeritel'naia Tekhnika i Poverochnoe Delo, Moscow, No. 2/3, 1930, pp. 22-26.



BOHR, Jan; PRAK, Włodzimierz

Effect of the decrease of body temperature on anaphylactic shock  
in guinea pigs. Polski tygod. lek. 10 no.1:19-20 3 Jan 55.

1. Z Zakładu mikrobiol. lekarskiej A.M. w Krakowie, ul. Czysta  
18, kierownik prof. dr. Z.Przybylkiewicz

(BODY TEMPERATURE

eff. of low temperature anaphylactic shock in guinea pig)

(ALLERGY

anaphylactic shock, eff. of low body temperature in  
guinea pig)

BOBR, Jan; PTAK, Włodzimierz

Course of experimental anaphylactic shock in paraldehyde  
anesthesia. Polski tygod. lek. 10 no.37:1213-1214 12 Sept 55.

1. Z Zakładu Mikrobiologii Lekarskiej A.M. w Krakowie;  
kierownik: prof. dr. Z. Przybylkiewicz. Krakow, ul. Czysta 18.  
Zakład Mikrobiologii Lekarskiej A.M.

(ALLERGY, experimental,  
anaphylactic shock, eff. of paraldehyde anesth.)  
(PARALDEHYDE, anesthesia and analgesia,  
eff. on exper. anaphylactic shock.)

BOBR, Jan; REMBISIA, Roman

Poikilothermal reactions to chlorpromazine. Polski tygod. lek. 11  
no. 24=1057-1059 11 June 56.

1. Z Zakladu Mikrob. Lekars. A. M. w Krakowie: Kier. prof. dr Z.  
Przybylkiewicz i z Zakladu Patol. Ogol. i Doswiad. A. M. w Krakowie:  
Kier. prof. dr. B. Giedosz. Krakow, ul. Czysta 18, Zakl. Mikrob. Lek.  
A. M.

(CHLOROPROMAZINE, effects,  
on body temperature in animals (Pol))  
(BODY TEMPERATURE, effect of drugs on,  
chlorpromazine (Pol) )

*BOBR, JAN.*

Peland/Pharmacology. Toxicology. Tranquilezers

V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37530

Author : Bobr Jan, Ptak W.

Inst : Not given

Title : Observations of the Effect of Hibernation and Neuroplegic Drugs in Experimental Tetanus. (Nabliyu-deniya nad deystviyem givernatsii i neyroplegicheskikh sredstv pri eksperimental'nom stolbnyake.

Orig Pub : Polski tygod. lekar., 1956, 11, No 39, 1679-1680

Abstract : The effect of hibernation induced by chilling and the application of pharmacological drugs, on the course of acute tetanus intoxication in mice and rats which were infected with known lethal doses of tetanus toxin or 24 hour culture of Clostridium tetani was studied. Before the infection and following the appearance of tetanus symptoms the animals

Card 1/2

Poland/Pharmacology. Toxicology. Tranquilizers

V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37530

Abstract : the animals were chilled to a body temperature of 28 to 30°. A part of the animals, after the appearance of tetanus symptoms, were again administered 2 mg/kg chlorpromazin, 2mg/kg of prometazin, and 4 mg/kg dolantin, or chlorpromazin only (3mg/kg) with the result that the body temperature dropped to 37°. Hibernation noticeably prolonged the life of the animals.

Card 2/2

KOSTRZEWSKI, J.; SKAWINSKA, Z.; MACH, B.; BOBR, J.; DUMANSKA, K.

Tissue respiration in experimental tetanus. Pat.polska 9 no.2:105-115  
Apr-June 1958

1. Z Kliniki Chorob Zakaznych Kierownik prof. dr J. Kostrzewski i z  
Zakladu Mikrobiologii Lekarskiej A.M. w Krakowie Kierownik prof. dr.  
Z. Przybylkiewicz. Adres autorat: Krakow, Kopernika 17, Klinika Chor.  
Zakaznych Akad.Med.

(TETANUS, metab.

tissue metab. in dog (Pol))

(METABOLISM, TISSUE,

in exper. tetanus in dog (Pol))

BOER-PORWIT, Zofia

SEE : PORWIT-BOER, Zofia

L 15969-66 EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/JW/WH

ACC NR: AT6002274

SOURCE CODE: UR/2564/65/006/000/0393/0406

AUTHOR: Bobr-Sergeyev, A.A.

ORG: none

TITLE: Synthesis of fluorophlogopite from microcline. (Paper presented at the Third Conference on Crystal Growing held in Moscow from 18 to 25 November, 1963.)

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, v. 6, 1965, 393-406

TOPIC TAGS: mica, crystallization, magnesium oxide, alkaline earth mineral, fluoride mineral, aluminum silicate mineral, potassium mineral

ABSTRACT: An experimental study of the effect of the composition of starting mixtures on the synthesis of fluorophlogopite was carried out. The components of the mixture were chosen so as to obtain a melt having a good crystallizability in order to reduce the amount of mineral impurities as much as possible and to avoid the formation of a vitreous phase. It was found that the crystallizing properties of the melt are affected not only by the formula of the mixture, but also by the crystallochemical characteristics of the reactants. A comparative study showed that the best mixtures were those composed of microcline,

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L 15969-66

ACC NR: AT6002274

2  
magnesium oxide, and magnesium fluoride. The crystallizability of microcline-base mixtures is due to the fact that the basic starting components  $MgO$ ,  $KAlSi_3O_8$ , and  $MgF_2$  are in the same coordinations as in mica.<sup>15</sup> microcline then represents, so to speak, a ready aluminosilicate nucleus of mica. Of great importance for the crystallization of mica is the temperature and duration of the homogenization of the melt, and also the crystallization rate. Author is deeply grateful to N.N. Sheftal' for suggestions and consultations during the study. Orig. art. has: 3 figures.

SUB CODE: 20, 07 / SUBM DATE: none / ORIG REF: 010 / OTH REF: 013

bvk

Card 2/2

*BOBR-TYLINGO, S.*

BOBR-TYLINGO, S.

D. Williams' "Negotiations Leading to the Anglo-Polish Agreement of March 31, 1939";  
a review of an article.

p. 108 (Bellona) No. 2, Apr./June 1957, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

BOBRAKOV, B.P.

Improvement in the line for the production of tomato juice.  
Kons. i ov. prom. 13 no.8:8-9 Ag '58. (MIRA 11:9)

1. Bykhovskiy ovoshchesushil'nyy zavod.  
(Tomato products)

BOBRAKOV, B.P.

Machine for cutting apples and removing cores. Kons. i ov. prom.  
14 no.9:8-10 8 '59. (MIRA 12:12)  
(Apple—Preservation)

MORDKOVICH, M.S.; BOBRAKOV, B.P.; PROKHAROVICH, L.Ye.

Efficiency of packaging tomato paste in large tin containers.  
Kons. 1 ov. prom. 15 no. 12:16-18 D '60. (MIRA 14:1)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.

(Tomato products--Packaging) (Tin cans)

MORDKOVICH, M.S.; SIROTA, M.A.; BOBRAKOV, B.P.; ZASLAVSKIY, A.S.

Sterilization of canned food in a continuous hydrostatic sterilizer.  
Kons. i ov. prom. 16 no.9:13-19 S '61. (MIRA 14:8)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.

(Canning industry--Equipment and supplies)  
(Food, Canned--Sterilization)

MORDKOVICH, M.S.; BOBRACOV, B.P.

Formation of sediment in apple juice. Kons. i ov. prom.  
16 no. 10:23-24 0 '61. (MIRA 14:11)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.

(Apple juice)

BOBRACOV, B.P.; MORDKOVICH, M.S.; SILICH, A.A.; TSVETKOVA, L.M.

Use of ferment preparations in the production of apple juice.  
Kons.i ov.prom. 18 no.2:6-8 F '63. (MIRA 16:2)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.

(Apple juice)



BOBRAKOV, B.P.; SIROTA, M.A.

Preventing the separation of the crushed tomato pulp in collecting vessels. Kons. i ov.prom. 18 no.4:15-16 Ap '63. (MIRA 16:3)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy promyshlennosti.

(Tomatoes, Canned)

BOBRAKOV, B.P.; GOL'DENBERG, G.G.; MORDKOVICH, M.S.; PROKHOROVICH, L.Ye.

Studying the causes of the increased rejection of defective  
tomato paste packed in large tin containers. Trudy MNIIPP  
3:3-14 '63.

(MIRA 18:1)

BOBRAKOV, B.P.; ZASLAVSKIY, A.S., kand.biol.nauk; MORDKOVICH, M.S.; SIROTA, M.A.

Investigating the processes of canned food sterilization in a  
"Hydron" sterilizer with continuous action. Trudy MNIIPP 3:27-44  
'63. (MIRA 18:1)

BOBRAKOV, B.P.

Instrument for testing the airtightness of sealed tin cans No.15.  
Trudy MNIIPP 3:15-20 '63.

Plotting the heating curves in the sterilization of apple juice.  
Ibid.:56-66 (MIRA 18:1)

BOBRAKOV, B.P.; MORDKOVICH, M.S.; SILICH, A.A.; TSVETKOVA, L.M.

Use of pectolytic fermentation preparations in the production of  
apple juice. Trudy MNIIPP 3:67-73 '63.

(MIRA 18:1)

BOBRAKOV, B.P.; MORDKOVICH, M.S.

Improved technology for the production of unclarified apple juice.

Trudy MNIIFP 3:45-55 '63.

(MIRA 18:2)

L 62265-65

ACCESSION NR: AP5019507

UR/0330/65/000/007/0018/0019 14  
664. 8. 036. 3 12

AUTHOR: Bobrakov, B.P. (Senior research associate); Karlina, N.N. (Senior laboratory technician); Mordkovich, M.S. (Senior research associate); Snapa, P.I. (Junior research associate) 44

TITLE: Pasteurization conditions for aseptic canning of juices in large tanks

SOURCE: Konservnaya i ovoshchesushil'naya promyshlennost', no. 7, 1965, 18-19

TOPIC TAGS: apple juice canning, grape juice canning, aseptic canning, pasteurization 44

ABSTRACT: In 1963-1964, the Moldavskiy nauchno-issledovatel'skiy institut pishchevoy . promyshlennosti (Moldavian Scientific Research Institute of the Food Industry) carried out laboratory and production-scale tests for the purpose of developing a technological process for aseptic canning of grape and apple juice in large stationary or mobile tanks. The conditions of pasteurization of the juice in a flow which make it possible to store the juice for a long time even when the bacterial population levels of the original fresh juice are high were determined. A diagram of the assembly used in the study is given. The assembly made it possible to saturate the juice with air, deaerate it by means of a vacuum, heat and cool the juice to various temperatures while changing the duration of the thermal treatment over a wide range, sterilize the assembly and tanks with steam, fill the tanks with carbon dioxide, sterilize the air filter with sulfur dioxide, and fill the tanks with juice under

Card 1/2

L 62265-65

ACCESSION NR: AP5019567

2

aseptic conditions for an extended storage. The optimum conditions insuring the sterility of the juice consisted in heating to 92C for 82 sec and cooling to 25 - 30C for 60 sec. Data are given on an experimental industrial assembly with a capacity of 3 - 3.5 t/hr, constructed at plant No. 2 of the Kishinev konservnyy kombinat (Kishinev Canning Combine). After six months storage, no organoleptic, chemical, or microbiological changes were found in the juice. Orig. art has: 1 figure and 1 table.

ASSOCIATION: Moldavskiy nauchno-issledovatel'skiy institut pishchevoy promyshlennosti (Moldavian Scientific Research Institute of the Food Industry)

SUBMITTED: 00

ENCL: 00

44 SUB CODE: GO,LS

NO REF SOV: 000

OTHER: 000

Card

1/m  
2/2



137-58-4-7208

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 127 (USSR)

AUTHORS: Fomichev, I. A., Ostrenko, R. Ya., Rozenfel'd, I. B., Bobrov, L. D.

TITLE: The Technical Foundations of the Production of 529 mm Tube on the 400 Mill of the Transcaucasian Plant (Tekhnologicheskiye osnovy proizvodstva trub diam. 529 mm na stane "400" Zakavkazskogo zavoda)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. trubnyy in-t, 1957, Nr 3, pp 17-25

ABSTRACT: The possibility of producing 529 mm diameter tubing (T), needed for gas and oil pipelines, on a 400 mill is established. Preliminary experiments with T of smaller size (325 and 273 mm diameter) showed that the amount of increase in diameter in the expansion of sleeves in two piercing mills may be as much as 40 percent and made it possible to carry out the necessary reconstruction of the plant equipment in order to develop a plan for a rolling schedule for making T of 529 mm diameter from 350 mm blanks. The rolling table envisages the production of 420 mm sleeves from the Nr 1 piercing mill and 520 mm diameter sleeves from the Nr 2.

Card 1/2

137-58-4-7208

The Technical Foundations of the Production of 529 mm Tube (cont.)

The following changes were made in the grooving of the piercing mill rolls: the entry taper was increased from  $3^{\circ}30'$  to  $4^{\circ}$ , and the exit taper from  $4^{\circ}$  to  $9^{\circ}$ . Rolls of minimum diameter were used to reduce loading. The diameter of the pass when rolling in an automatic mill was 51 mm. The diameter of the T past the reeling mill was 540-550 mm, and this assured the required reduction in diameter in the sizing mill. The profile of the rolls of the reeling mill was changed so that the entry taper was  $2^{\circ}30'$ . The sizing mill was arranged for work with various stands. The diameter of the pass in the fourth stand was 534 mm. Technical and power calculations are presented, and these are to be used in organization of manufacture.

1. Steel tubing--Manufacture      2. Piercing mills--Equipment

I. M.

Card 2/2

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 71 (USSR). SOV/123-59-15-59344

AUTHORS: Ostrenko, V.Ya., Bobrakov, L.D.

TITLE: Taking up the Manufacture of Thin-Walled Tubes of Large-Diameter by a big Automatic Mill at the Trans-Caucasian Metallurgical Plant

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4 - 5, pp 17 - 23.

ABSTRACT: The manufacture of tubes of the grades 168 x 5, 168 x 6, 219 x 6, 273 x 7 and 325 x 8 mm with a minimum thickness of walls corresponding to the GOST 301-50 was taken up by the "400" mill of the ZMZ.  
Zh.V.T.

Card 1/1

S/137/61/000/005/019/060  
A006/A106

AUTHORS: Ostrenko, V.Ya., Bobrakov, L.D.

TITLE: Comprehensive rolling of pipes on pilger and automatic mills

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 26, abstract 5D246  
("Byul. nauchno-tekhn. inform. Ukr. n.-i. trubn. in-t", 1959, no.  
6 - 7, 28 - 33)

TEXT: A new pipe rolling method was tested, consisting in the rolling of thick-walled pipes from an ingot on a pilger mill, and subsequent rolling on the automatic mill. Grade CT.20 (St.20) steel pipes of 325 x 9 mm dimensions were rolled. A blank of 280 x 55 mm was rolled on the pilger mill and a 325 x 9 mm pipe on a "400" automatic mill. Improved quality of pipes as to their external and internal skin was observed on a batch of blanks subjected to preliminary repair. Comprehensive rolling under certain conditions may promote the improvement of the pipe quality.

[Abstracter's note: Complete translation]

Yu. M.

Card 1/1

OSTRENKO, V.Ya., kand. tekhn. nauk; BOBRAKOV, L.D., inzh.; MIRONOV, Yu.M., inzh.;  
GEYKO, I.K., inzh.

Force and torque in piercing on large automatic equipment. Proizv.  
trub no.10:31-36 '63. (MIRA 17:10)

Country : USSR K  
 Category : Forestry. Forest Management.  
 Abs Jour : RZhBiol., No 6, 1959, No 24727  
 Author : Bobrakov, L. N.  
 Inst : Krasno-Trostryanets Forest Experimental Station.  
 Title : Concerning the Productivity Increase of Plan-  
 tings at Attentive Tree-Fellings in a Recent  
 Grove.  
 Orig Pub : Lesn. kh-vo, 1958, No. 7, 14-16  
 Abstract : Tree-felling experiments in Krasno-Trostrya-  
 nets Forest Experimental Station (Sumskaya  
 Oblast) are analyzed in oak and oak-ash culti-  
 vations of different ages (from 15-62 years)  
 and in natural oak-ash stands of the ages of  
 45-95 years. Data on the intensity of the tree-  
 fellings according to the method of care, the  
 reserve increase and general productivity of  
 Card : 1/3

BOBRAKOV, V. (Col. Engr.)

"Landing Gear with Nose Wheel," Vest. Vozdush Flota, No 9, pp 69-72, Sept 51

Translation D 165625, Sep 51

BOBRAKOV, V. (Col., Engr.)

"The chassis with a front wheel," 1952. (The Herald of the Air Fleet), 1952.



BOBRAKOV, Yuriy Ivanovich; BUGROV, Yevgeniy Vladimirovich; YEPIFANOV,  
M.P., red.; ROMANOVA, N.I., tekhn. red.

[Economy of the U.S.A. is in a labyrinth of contradictions]  
Ekonomika SShA v labirinte protivorechii. Moskva, Izd-vo  
In-ta mezhdunarodnykh otnoshenii, 1961. 50 p. (MIRA 14:8)  
(United States--Economic conditions)

BOBRANITSKIY, Yu.P.

Converter of the angle of shift and angular speed to binary code.  
Avtom.i prib. no.4:28-31 O-D '62. (MIRA 16:1)

1. Institut avtomatiki Gosplana UkrSSR.  
(Electronic digital computers)

L 32386-65 EWT(m)/EWP(c)/EWP(v)/BPR/EWP(j)/T pc-4/r-4/r-4 25

ACCESSION NR: AP5007184

S/0286/65/000/002/0 001/0061 E

AUTHOR: Kozin, V. M.; Bobrakov, Ye. I.; Kokhanskaya, O. V.

TITLE: A method for producing a polymer composition. Class: 22, 8, 1, 198, 2

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 61

TOPIC TAGS: polymer, furfural, resin, water resistance

ABSTRACT: This Author's Certificate introduces a method for producing a polymer composition based on a binder (furfuralacetone monomer), filler and hardener. In order to improve resistance to water and dilute acid and base solutions, a furfural solution of coumarone indene resin is added to the binder.

ASSOCIATION: none 15

SUBMITTED: 25May64

ENCL: 00

SUB CODE: MT, CC

NO REF SOV: 000

OTHER: 000

Cord 1/1

BOBRANITSKIY, Yu.P.

Using diode matrices for the calculation of the function of one  
variable. Avtom.i prib. no.1:49-52 Ja-Mr '63. (MIRA 16:3)

1. Institut avtomatiki Gosplana UkrSSR.  
(Electronic digital computers—Programming) (Matrices)

10

CA

Synthesis of 2-carboxymethylquinoline-3-carboxylic acid and several of its derivatives. B. BOBRASKI AND E. SUCHARDA. *Roczniki Chem.* 7, 192 233 (1927); *Chem. Zentr.* 1928, I, 2002.  $\text{CO}(\text{CH}_2\text{CO}_2\text{Et})_2$ , made slightly alk. with  $\text{NH}_4\text{OH}$  and treated with  $\alpha\text{-H}_2\text{NC}_6\text{H}_4\text{CHO}$ , gives di-Et 2-carboxymethylquinoline-3-carboxylate (I), yellow, m. 62°.  $\text{HCl}$  salt, from concd.  $\text{HCl}$ , m. 108°. nitrate, m. 111°. Heating I with  $\text{MeOH-KOH}$  6 hrs. at 70° gives the free acid, which loses  $\text{CO}_2$  energetically above 60° and yields 2-methylquinoline-3-carboxylic acid (II), whose  $\text{HCl}$  salt m. 145° (decompn.) and then at 218-9°, corresponding to quinoline-11Cl. The K salt of II, warmed with  $\text{AcCl}$  or  $\text{BaCl}$  in  $\text{Et}_2\text{O}$ , gives 2-carboxymethylquinoline-3-carboxylic anhydride, m. 255° (decompn.). Its *Ac* deriv., 1-keto-3-acetoxy-2-oxa-10-azaanthracene, upon boiling the anhydride with  $\text{AcONa}$  and  $\text{Ac}_2\text{O}$ , m. 239°. Upon warming the anhydride with  $\text{MeOH-KOH}$  at 70°, the elements of  $\text{H}_2\text{O}$  are again added. The di-Et ester, satd. with dry  $\text{NH}_3$ , gives the acid imide, 1,3-dihydroxybenzo-2,5-naphthyridine,  $\text{C}_{12}\text{H}_7\text{O}_4\text{N}_2$ .  $\text{NH}_3$ , passed into the suspension of the anhydride in  $\text{C}_6\text{H}_5\text{N}$  ppts. 2-carboxymethylquinoline-3-carboxamide, m. 218-20° (decompn. above 150°).

C. J. WEST

ASAC-11A METALLURGICAL LITERATURE CLASSIFICATION

2-3


PROCESSING AND PROPERTIES INDEX

Centigram determination of halogens in organic substances. B. Bonasent (Rec. Chem., 1931, 11, 391-393, and K. Anal. Chem., 1931, 64, 235-240). The substance (0.5-0.4 g.) is burned, using Fe catalyst in  $O_2$  passed at the rate of 5 c.c. per min. for Cl or Br derivatives, and 10 c.c. per min. for I derivatives.  $Cl_2$  and  $Br_2$  are absorbed by  $BaCO_3$  heated at  $500^\circ C$  and heated at the end of the combustion with  $Na_2SO_3$ . I is absorbed by a 25% solution of  $Na_2SO_3$  containing a trace of  $BaCl_2$ . The absorbed halogens are titrated with 0.05N  $AgNO_3$  in presence of potassium dichromate (useful for Cl, and sodium carbonate for Br and I) and adding starch paste to prevent precipitation of insoluble silver halides. The mean error of the method is about 0.2%.

R. Tuszynski.

ASB-ILA METALLURGICAL LITERATURE CLASSIFICATION

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COMMON ELEMENTS		PROCEDURES AND PROPERTIES INDEX																																																																																																																																																																																																									
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		<p>Pyridino-2':3':5:6-coumarin. B. BORRASI and L. KOCHANSKA (Rocz. Chem., 1937, 17, 30-32).—Pyridino-2':3':5:6-coumarin, m.p. 187°, is prepared from 7-hydroxyquinoline, <math>\text{CH}_3(\text{CO}, \text{H})</math>, and <math>\text{H}_2\text{SO}_4</math> (100°; 2 hr.), or from 7-hydroxy-8-allylquinoline, NaOAc, and <math>\text{Ac}_2\text{O}</math> (180°; 2 hr.). R. T.</p>																																																																																																																																																																																																									
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MATERIALS INDEX

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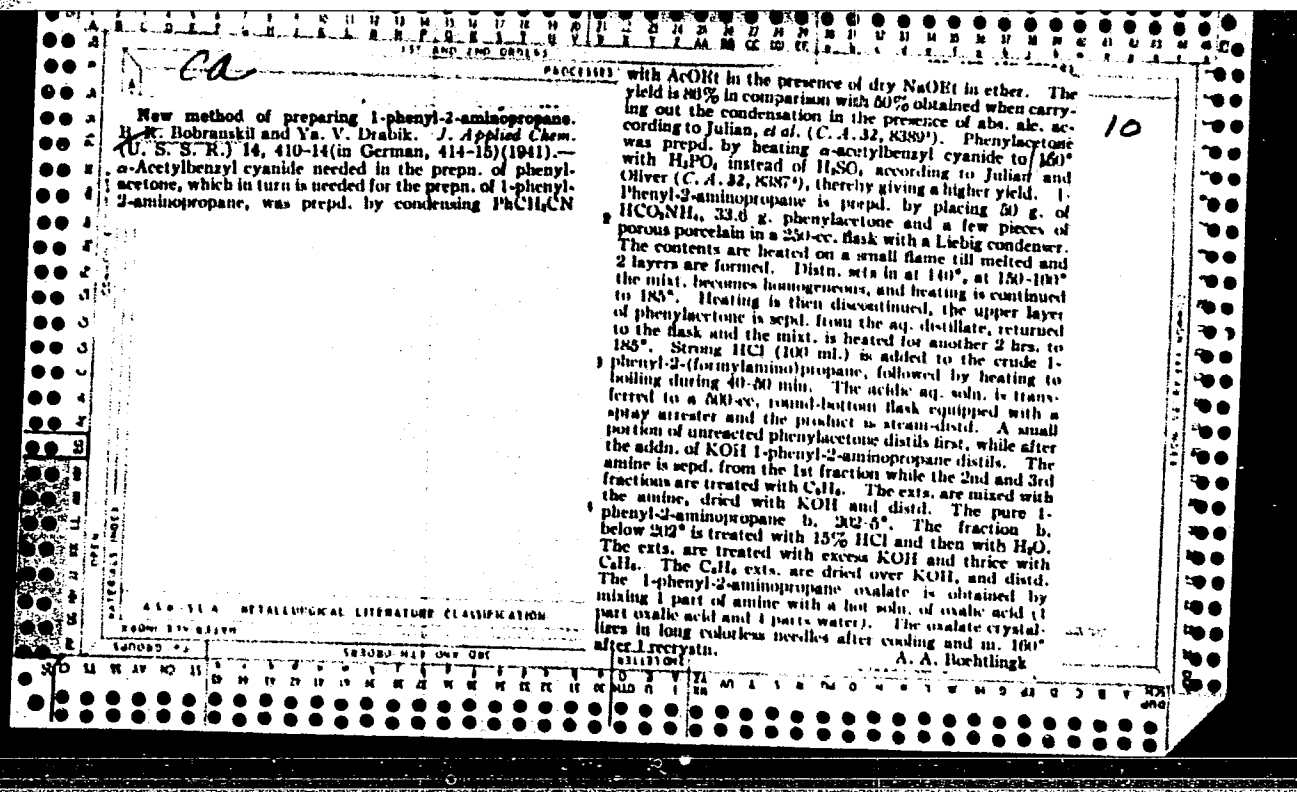
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10

CA

Preparation of N'-2-pyridylsulfanilamide. B. R. Bozanski and I. M. Eker. *J. Appl. Chem.* (U. S. S. R.) 13:1637-41(1940).— 2-Aminopyridine (9.4 g.) was mixed with 5 g. of  $\text{Na}_2\text{O}$  and 23.4 g.  $p\text{-AcNHCl}\cdot\text{H}_2\text{SO}_4\cdot\text{Cl}$ , and the mixt. was slowly heated in a water bath. The condensation took place at about  $50^\circ$  with a large evolution of heat. After 30 min., the solid mass was heated with 300 cc. of water in a water bath, cooled and the product was filtered out. The yield of N'-acetyl-N'-2-pyridylsulfanilamide (I) was 12 g., m.  $225^\circ$ . The 2nd method was to melt 18.8 g. of 2-aminopyridine in a water bath and add slowly 24.4 g. of acetylsulfanilyl chloride, then proceed as above. The yield of I (crude) was 18.8 g. A mixt. of 20.2 g. I and 150 cc. 15%  $\text{HCl}$  was heated to  $58-62^\circ$  for 1 hr. After cooling and neutralizing with  $\text{Na}_2\text{CO}_3$  the product was sepd., washed and recrystd. from alc. The yield of sulfapyridine, m.  $102^\circ$ , was 75%. A. A. Podgorny



COMMON ELEMENTS	<p>Preparation of the dimethylcarbamate ester of m-hydroxyphenyltrimethylammonium methyl sulfate (prostaglandin, prostigmine). H. R. Dobranski and I. M. Riker. <i>J. Applied Chem.</i> (U. S. S. R.) 14, 834-7 (1941).—The authors investigated the prepn. of the dimethylcarbamate of m-hydroxyphenyltrimethylammonium methyl sulfate (I), which is a valuable medicinal introduced by Hoffman-LaRoche as prostigmine. Since all preps. of I require m-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OH as starting material, the prepn. of this substance (II) was first investigated. In general it was found impossible to reproduce the results claimed in its prepn. by the action of aq. Me<sub>3</sub>NH on m-C<sub>6</sub>H<sub>4</sub>(OH), under pressure (Ger. pat. 49,000), or sulfonation of Me<sub>3</sub>NPh followed by NaOH fusion (Ger. pat. 44,792). The following scheme was finally adopted. Me<sub>3</sub>NPh was nitrated according to Groll (<i>Ber.</i> 19, 188 (1896)); on neutralization of the ice-cooled soln. by NaOH the p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMe<sub>3</sub> pptd. first, and addn. of NaOH is stopped when a permanent red color appears (pptn. of the m-isomer); the p-isomer is filtered off, and the m-isomer pptd. by addn. of further NaOH; the crude product is extd. with benzene, the solvent is distd. off, the residue dried and dissolved in 10 vols. 10% HCl; the cloudy soln. is dild. with an equal vol. of H<sub>2</sub>O, causing pptn. of the p-isomer impurity; NaOH soln. is carefully added until a permanent red ppt. appears, and the remainder of the p-isomer is filtered off; the filtrate on neutralization by NaOH to weak acid reaction (Congo red) yields m-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMe<sub>3</sub>, m. 59-60°, which is washed with H<sub>2</sub>O and dried; on crystn. from EtOH-Et<sub>2</sub>O it m. 61°; yield, 65%. The NO<sub>2</sub> compd. (32 g.) was slowly added with stirring to 65 g. powd. Fe, 50 cc. H<sub>2</sub>O and 18 cc. 20% HCl heated on a water bath, followed by addn. of 10 g. Fe, 10 cc. H<sub>2</sub>O and 6 cc. 25% HCl and stirring for 0.5 hr., then treated with 72 g. anhyd. Na carbonate: the</p>	<p>pptd. amine was extd. with benzene, the ext. dried with NaOH, the solvent distd. and m-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> distd. <i>in vacuo</i>, b<sub>1</sub> 138°, b<sub>2</sub> 140°, b<sub>3</sub> 143°, in 80% yield. The diamine (33 g.) dissolved in 330 g. 85% H<sub>2</sub>SO<sub>4</sub> with cooling (not over 20°) was treated with stirring with 17 g. powd. NaNO<sub>2</sub>, stirred for 0.5 hr., heated on a water bath, at 50° for 0.5 hr. with stirring, poured into 1 l. cold H<sub>2</sub>O and heated on a water bath until N evolution stopped; after cooling and neutralization by solid Na carbonate the soln. was extd. with benzene, the latter dried, the solvent distd. and the II distd. <i>in vacuo</i>, b<sub>1</sub> 152°; yield 65%. II (7.6 g.) was dissolved in the calcd. amt. of concd. NaOH soln. in EtOH, the EtOH distd. off <i>in vacuo</i> in a stream of illuminating gas, and the residue treated with 7 g. Me<sub>3</sub>NCOCI (20% excess) in dry Et<sub>2</sub>O; after the initial reaction was finished, the mixt. was heated on a steam bath for 0.25 hr., treated with H<sub>2</sub>O and the Et<sub>2</sub>O layer sep'd., washed twice with 5% NaOH, 3 times with H<sub>2</sub>O, dried, and distd. <i>in vacuo</i>; m-dimethylaminophenyl dimethylcarbamate is obtained in 57% yield, b<sub>1</sub> 195°. The ester (6.1 g.) in 15 cc. dry Me<sub>2</sub>CO was treated with 3.72 g. Me<sub>2</sub>SO<sub>4</sub>; after 15-20 min. 1 ppts. as colorless crystals, which are filtered and washed with Me<sub>2</sub>CO, m. 130-40°. A single crystn. from 20 vols. Me<sub>2</sub>CO gives a product m. 143-4°, in 75% yield. It was also noted by B. and E. that the patent data (Ger. pat. 44,003) for the prepn. of II do not lead to the desired reaction; and that 85% H<sub>2</sub>SO<sub>4</sub> (as described above) and not dil. H<sub>2</sub>SO<sub>4</sub> leads to the correct product.</p> <p>G. M. Kosolapoff</p>

COMMON ELEMENTS										COMMON VALUABLES									
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NATURAL										ARTIFICIAL									
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EDWARD BARBARA (1891-1947). B. Barbara. <i>Prag-</i> <i>mat. Chem.</i> 5, 503-5 (1947).—An obituary with portrait and bibliography. A. Sporyński																			
A.S.A. METALLURGICAL LITERATURE CLASSIFICATION										E.C.A. METALLURGICAL LITERATURE CLASSIFICATION									
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